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Is It Possible to Use More of Our Brains?

Barry Gordon, professor of neurology and cognitive science at Johns Hopkins University School of Medicine, replies

By Barry Gordon | Saturday, March 3, 2012 | 21

Is it possible to use more of our brain?

-- Michael Lenneville, Washington, D.C

Barry Gordon, professor of neurology and cognitive science at the Johns Hopkins University School of Medicine, replies:

Yes! Though perhaps not how you might imagine. You can't put more of your brain to work. Your whole brain is working all the time, even when you think you're just being lazy. What you can do is make it work more productively.

There are two proved strategies to make your neural systems more efficient. The first strategy is to focus, which is hard to do. It is quite difficult to force your brain to stay on task and to shut off extraneous thoughts. Yet by concentrating, your brain can muster the neural tools it needs to tackle a complex problem. In fact, intense focus may be one reason why so-called savants become so extraordinary at performing extensive calculations or remembering a slew of facts.

The second approach is optimization. The human brain is far from an ideal "thinking machine." Our mental processes are slow, and the accuracy of our memory is far from perfect. Our intrinsic limitations are compounded by the simple mental blunders we make; these unhelpful tendencies, however, are correctable. For instance, you can become a better problem solver by looking beyond your personal biases and blind spots to consider alternative solutions. The more you learn to recognize and seek a variety of answers, the better your brain will be at finding optimal solutions.

Some proof that focus and optimization can improve the brain's performance comes from research on video gamers. Neuroscientists at the University of Rochester have shown that even novice gamers can improve cognitive skills such as perception and attention by playing action video games. These games can strengthen players' mental acuity because they require intense concentration and ruthless self-correction (otherwise, your friends shoot you!).

Sometimes, however, you may think better when you're not trying so hard. (You have to consider all the alternatives.) Periods of artistic and scientific creativity—when people often tackle the biggest, most open-ended problems—usually require letting your brain meander, percolate, chill. It may not feel like you are using more of your brain when you unleash it in this way, but one virtue of the human brain is that it often does its best work when it does not seem to be working at all.

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